



PLEASE STAND BY

You will hear silence until the presentation begins.



The HIV.STD.TB.Hepatitis Program in collaboration with Dakotas AIDS Education and Training Center (DAETC) conducts Lunch and Learn Webinars for health care professionals in North and South Dakota.

Each month a new topic will be held from 12:00 p.m. to 1:00 p.m. CT on the **fourth Wednesday of the month.**

Next L&L : January 24, 2018

Register: <https://www.ndhealth.gov/hiv/Provider/>



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<https://www.ndhealth.gov/hiv/Provider/>

For questions or comments contact:

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THE GREAT IMITATOR

WHAT YOU NEED TO KNOW ABOUT SYPHILIS

LUNCH N' LEARN

DECEMBER 20, 2017

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WHAT ARE YOU GOING TO LEARN TODAY?

- Identify appropriate laboratory tests used to diagnosis current, past and possible reinfection of syphilis.
- Describe symptoms, characteristics, timeline and infectivity of the different stages of syphilis.
- Identify questions included in a case interview and needed steps for complete partner services.

SYPHILIS – CALL TO ACTION FROM CDC

- Sexually Transmitted Disease
- Serious Complications
- 1943 – Penicillin is Treatment
- Syphilis Rates are Increasing among Women & Babies and Men throughout the U.S.
- Partnerships between health care providers & public health departments to reverse national trends



THE GREAT IMITATOR – HERPES OR SYPHILIS?

- Diagnosis Based on Length of Syphilis Infection
- Classified into Stages
- Screening and Confirmatory Testing



THE INFECTIOUS STAGES OF SYPHILIS.

Primary

- Occurs after incubation
- Occurs in every case
- Usually one or more chancres at the site of exposure
- Most infectious stage of syphilis

Secondary

- Occurs any time after the eruption of the primary chancre (usually 4 – 6 weeks up to one year)
- The “great imitator” – rashes of different varieties, often on palms and soles

SYPHILIS WITHOUT SYMPTOMS – LATENT

Early Latent

- Occurs after incubation
- Occurs in every case
- Usually one or more chancres at the site of exposure
- Most infectious stage of syphilis

Late Latent

- Occurs any time after the eruption of the primary chancre (usually 4 – 6 weeks up to one year)
- The “great imitator” – rashes of different varieties, often on palms and soles

MOTHERS CAN INFECT HER FETUS AT ANY STAGE OF SYPHILIS.

Congenital Syphilis



- Up to 40% of babies born to women with untreated syphilis may be stillborn or die from syphilis as a newborn
- Pregnant Women Screening
 - First Prenatal Visit
 - High Risk Women: 28 – 32 Weeks Gestation & At Delivery
- Evaluation and Treatment of Neonates, Consider:
 1. Diagnosis of Syphilis in Mother
 2. Appropriate Maternal Treatment
 3. Evidence of Syphilis in Neonate
 4. Comparison of Maternal Laboratory Results

THERE ARE MANY MANIFESTATIONS OF SYPHILIS.

Neurosyphilis

- Cognitive Dysfunction
- Motor or Sensory Deficits
- Ophthalmic or Auditory Symptoms
- Cranial Nerve Palsies
- Specimen Source: CSF

Ocular Syphilis

- Can involve almost any eye structure.
- Ocular syphilis may lead to decreased visual acuity including permanent blindness.
- Eye redness, blurry vision, and vision loss.

Otosyphilis

- Sensorineural Hearing Loss
- Tinnitus
- Vertigo

Late Manifestations

- 15-30 yrs. after untreated infection
- Inflammatory lesions:
 - Cardiovascular System
 - Skin
 - Bone
 - Other Tissue

WHO SHOULD BE TESTED FOR SYPHILIS?

- Pregnant females
- Partner(s) exposed to a positive syphilis case
- Blood donors
- MSM
 - Screen CT, GC and syphilis at 3 – 6 mo intervals if reporting multiple and anonymous sex partners
- HIV+ individuals should be tested once a year

TESTING OPTIONS FOR SYPHILIS

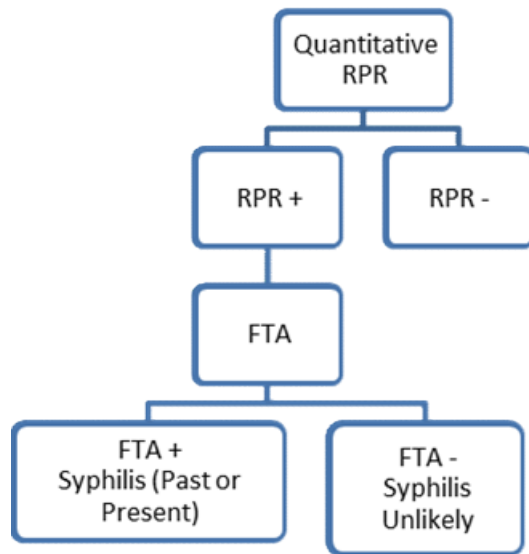
Treponemal

- Detects specific antibodies against *T. pallidum*
- Remains positive after 1st infection
- Screening or confirmatory
- FTA-ABS, TPPA, EIA

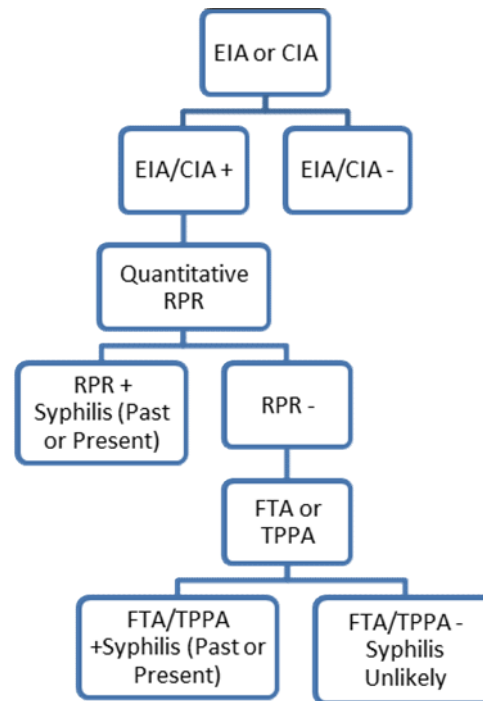
Non-Treponemal

- Detects non-specific antibodies caused by damage to cell membrane
- Reflects activity of disease
- Screening or confirmatory
- RPR (VDRL)

Traditional



Reverse



SYPHILIS TESTING ALGORITHMS

WHICH DO
YOU USE?

SENSITIVITY OF SEROLOGICAL TESTS IN UNTREATED SYPHILIS

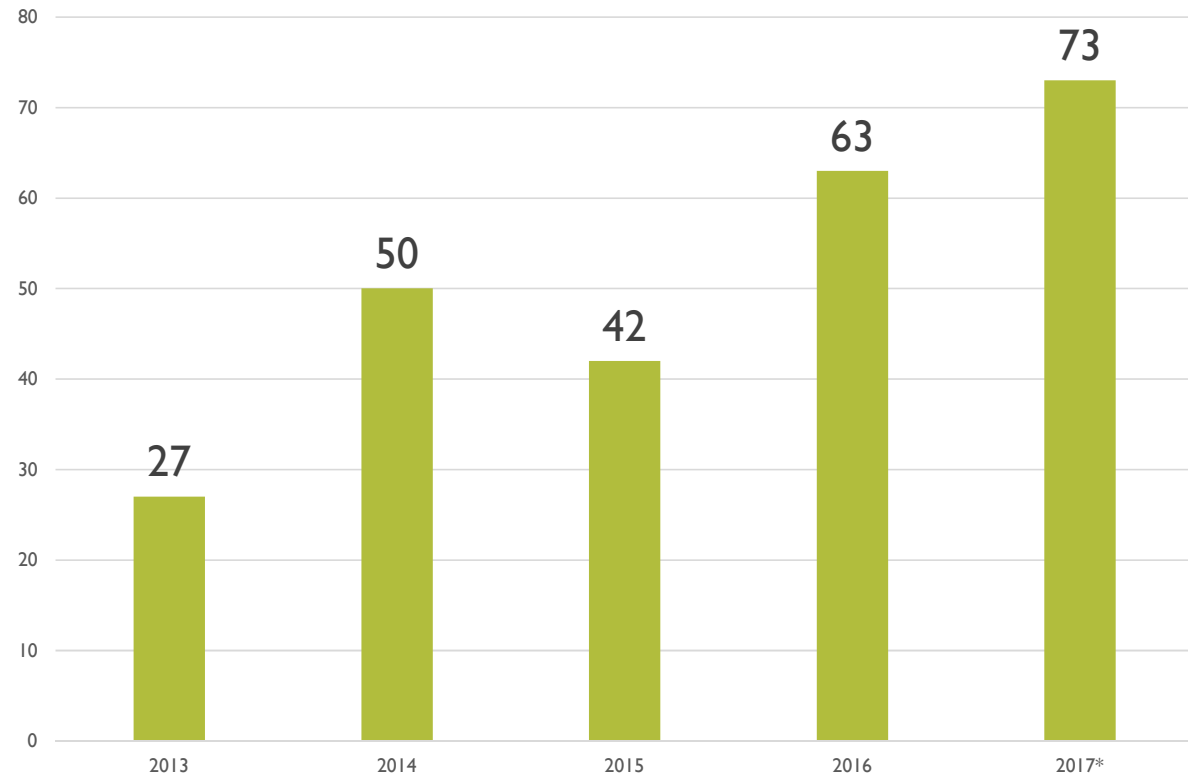
Test	Stage of Disease (Percent Positive (Range))			
	Primary	Secondary	Latent	Tertiary
RPR	78 (74-87)	100	95 (88-100)	71 (37-94)
FTA-ABS*	84 (70-100)	100	100	96
Treponemal Agglutination	76 (69-90)	100	97 (97 – 100)	94
EIA/CIA	90 (82-93)	100	100	Not Available

THE TREATMENT FOR SYPHILIS HAS BEEN AVAILABLE SINCE 1943.

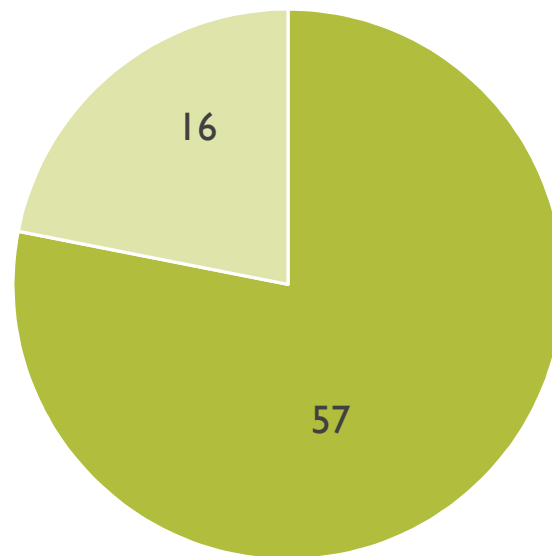
- Penicillin Still Works. Only Treatment Option for Pregnant Women. Dosage Depends on Stage.

Stage of Syphilis	Dosage
Primary	Benzathine penicillin G 2.4 million units
Secondary	Benzathine penicillin G 2.4 million units IM
Early latent	Benzathine penicillin G 2.4 million units
Late Latent	Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals

Syphilis Case Counts 2013-2017*

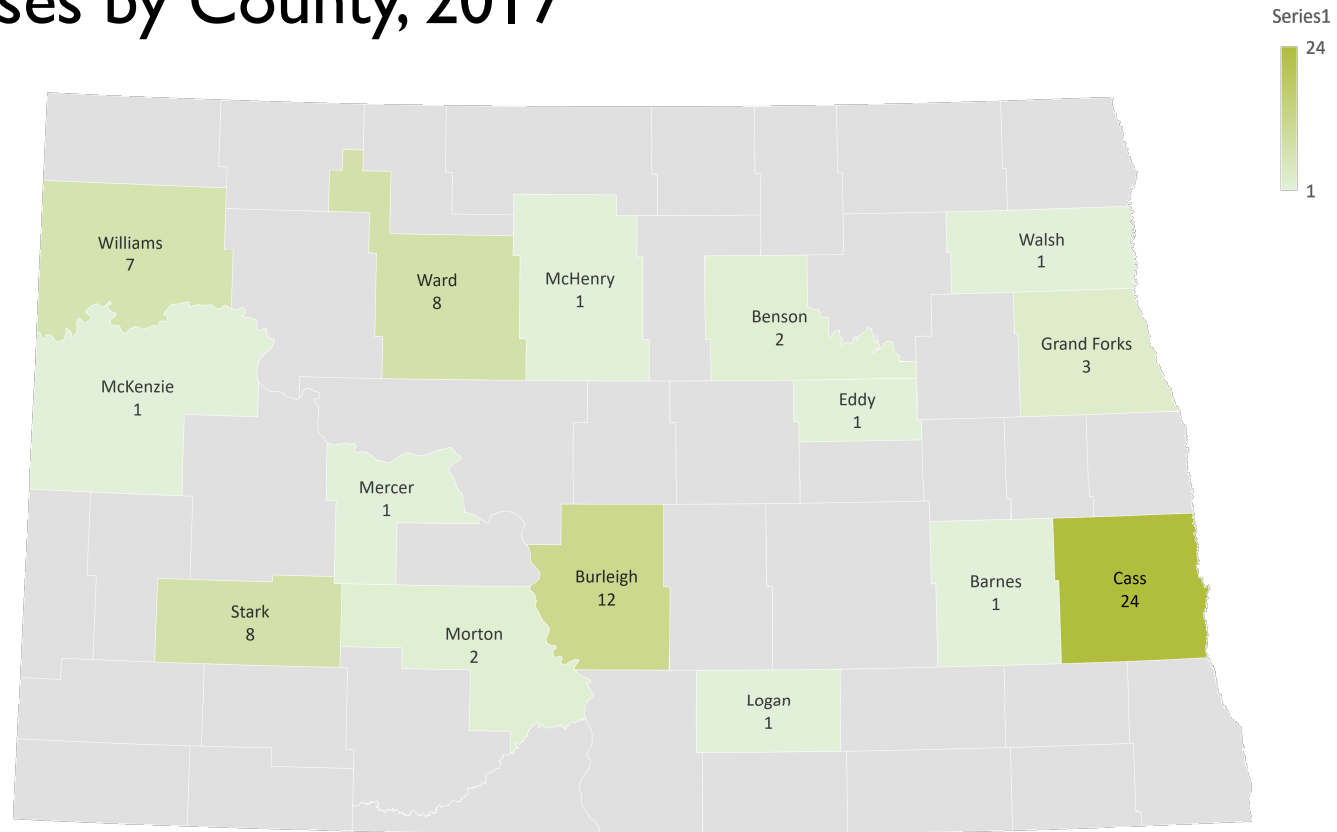


78% of 2017 Syphilis Cases are Male



■ Male ■ Female

Syphilis Cases by County, 2017



Average age is
33 years

37% report
having
anonymous sex

12% are HIV
positive

CASE STUDY #1

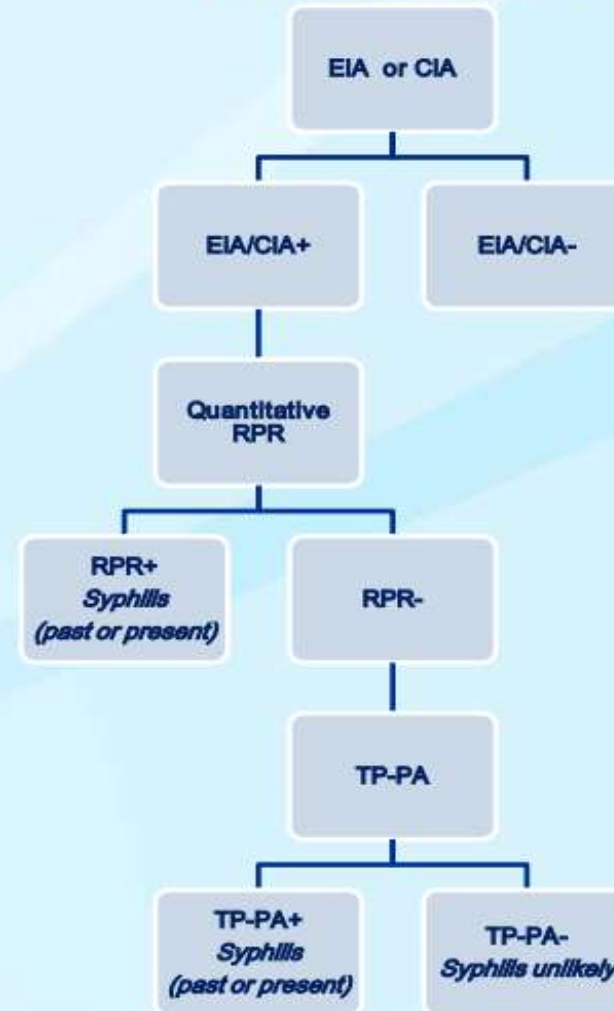
25 year old female was tested for syphilis as part of OB screen using the reverse algorithm. Test results were:

- EIA/CIA – Positive
- RPR - Non-Reactive
- TPPA – Positive

What do these test results mean?



Reverse sequence





HEALTH DEPARTMENT

- REGISTRY OF SYPHILIS CASES
- VERIFY TREATMENT HISTORY IN ND AND OTHER STATES



CASE STUDY #2

30 year old male with a painless penile chancre tests positive for syphilis in the clinic on December 1, 2017. He reports having 3 male partners and 1 female partner in the last year. What partner(s) should be presumptively treated regardless of test results?

John – last exposure was 7 weeks ago

Robert – unsure of exact date, but says it was in early summer

Lisa – on and off for the last 6 months, last time was last week

Steve – last exposure was August 2, 2017

JOHN & LISA

Persons who have had sexual contact with a person who receives a diagnosis of primary, secondary, or early latent syphilis within 90 days preceding the diagnosis should be treated presumptively for early syphilis, even if serologic test results are negative.

CONTACT INVESTIGATION

Regions for Field Epidemiologists January 2017



Area	Epidemiologist	Phone
Blue	Lacy Oylor	774.6405
Green	Linda Larson	838.3340
Grey	Jennifer Schmidt	252.1325
Dark Green	Shawn McBride	787.8130
Light Green	Brenton Nesemeier	241.1386
Orange	Gino Jose	328.9760
Yellow	Gerry Haag	483.0171

- Assist with Contact Investigation
- Case Interview
- Partner Elicitation
- Partner Notification
- Verification of Partner Treatment
- Knowledgeable About Infectious Periods

CASE STUDY #3

A 46 year old male presents to his local public health unit for STD screening as he recently heard on the news that STD rates have been increasing. He can't remember the last time he was tested but says he has never tested positive for a STD. He reports being in a monogamous relationship for the last 18 months with his boyfriend. He has no current symptoms or complaints. His syphilis results come back as TPPA positive and a RPR titer of 1:4. He states he has a penicillin allergy. How do you stage and treat?

Because the patient has no symptoms, no prior history of syphilis and the infection would have occurred more than 12 months ago, he would be staged as having late latent syphilis. With a penicillin allergy, he can be treated with doxycycline 100mg orally twice daily for 28 days.



CASE STUDY #4

A woman tests positive for syphilis at her first OB visit with a positive TPPA and an RPR titer of 1:32. She is treated for early latent syphilis with one dose of 2.4 MU of Bicillin. She does not seek care again until she delivers what appears to be a healthy baby at 38 weeks. The provider orders serologic testing for the infant and mother. The mother's test results are TPPA positive and a RPR titer of 1:4. The infant's results come back as TPPA positive and an RPR titer of 1:1. Is this a case of congenital syphilis?



NO

- Mother's treatment was adequate
- Normal physical examination
- RPR titer equal to or less than fourfold the maternal titer
- Mother's RPR titer is low

SYPHILIS FOLLOW-UP

- Nontreponemal Tests at 6, 12 & 24 Months
- HIV PrEP Assessment
- Yearly Screening
 - HIV Testing, Rectal/Oral/Urine Chlamydia & Gonorrhea Screening



RESOURCES

- CDC Call to Action: Let's Work Together to Stem the Tide of Rising Syphilis in the United States
- NDDoH Syphilis HAN: Increasing Syphilis Infections and Anonymous Contacts in North Dakota
- CDC STD Treatment Guidelines
- Syphilis - CDC
- NDDoH – Disease Control – 701.328.2378



CONTACT US WITH QUESTIONS

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